

# **EXHIBIT A**

**IN THE UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF TEXAS  
WACO DIVISION**

SONOS, INC.,

Plaintiff,

v.

Google LLC,

Defendant.

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NO. 6:20-cv-00881-ADA

**PLAINTIFF SONOS, INC.'S FINAL INFRINGEMENT CONTENTIONS**

## I. INTRODUCTION

Plaintiff Sonos, Inc. (“Sonos” or “Plaintiff”) accuses Defendant Google LLC (“Google” or “Defendant”) of infringing U.S. Patent Nos. 9,967,615 (the “’615 Patent”), 10,779,033 (the “’033 Patent”), 10,469,966 (the “’966 Patent”), and 10,848,885 (“the ’885 Patent”) (collectively, “the Asserted Patents”). On December 11, 2020, Sonos served its Preliminary Infringement Contentions for the ’615, ’033, ’206, and ’966 Patents. On February 17, 2021, Sonos served its First Supplemental Preliminary Infringement Contentions to add contentions for the ’885 Patent. On June 4, 2021, Sonos served its Second Supplemental Preliminary Infringement Contentions and on July 14, 2021 Sonos served its Third Supplemental Preliminary Infringement Contentions. Pursuant to the scheduling order and agreement by the parties, Sonos now serves its Final Infringement Contentions.

Sonos bases these contentions on its current knowledge, understanding, and belief as to the facts and information available as of the date of these contentions. Sonos has not yet completed its investigation, collection of information, discovery, or analysis relating to this action, and additional discovery, including discovery from Google and third parties, may lead Sonos to further amend, revise, and/or supplement these contentions. Indeed, the accused functionalities of the accused instrumentalities are implemented, at least in part, by proprietary and specialized electronics, firmware, and/or software, and the precise designs, processes, and algorithms used to perform the accused functionalities are held secret, at least in part, and are not publicly available in their entirety. As such, an analysis of non-publicly-available documentation and source code, including that of Google and/or third-parties, such as Spotify, may be necessary to fully and accurately describe every infringing functionality.

However, merits discovery in this action has barely begun, opening just 34 days ago and, as of the date of service of these contentions, is not scheduled to close until January 27, 2022. To date, Google has not produced documents responsive to Sonos’s outstanding document requests, no depositions have been taken, and third-party discovery remains outstanding including document and deposition subpoenas to Spotify.

Likewise, Google’s interrogatory responses are woefully deficient in many respects and completely non-responsive in others. As a non-limiting example, in response to Sonos’s interrogatories asking Google to explain certain discrete aspects of how Google’s own products work, Google responded only by referring Sonos to Google’s entire source code production

(without referring to any particular code modules, functions, methods, line numbers, or even directories) and by block citing over 48,000 pages of Google’s document production. As another non-limiting example, in response to Sonos’s interrogatory asking how the Accused Cast-Enabled Apps are made available for download, Google refused to respond at all. Without the benefit of discovery responses from Google, Sonos’s inspection of Google’s source code is ongoing. Given that fact discovery has only just opened (34 days ago) and Google only served its (deficient) discovery responses on September 7 (3 days ago), Sonos has not had an opportunity to confer with Google on these responses or approach the Court for intervention, if necessary.

For at least these reasons, Sonos specifically reserves the right to further amend, revise and/or supplement these contentions and/or accompanying exhibits in accordance with any Orders of record in this matter, and Federal Rule of Civil Procedure 26(e), as additional documents and information become available and as discovery and investigation proceed. Sonos also reserves the right to supplement, modify or amend these contentions to include additional products or services made, used, sold, or offered for sale in or imported into the United States by Google.

The information in these contentions is not an admission regarding the scope of any claims or the proper construction of those claims or any terms contained therein.

## II. CLAIM CONSTRUCTION

The Court held a Markman hearing on August 10, 2021. Although the Court has not yet issued an order or opinion construing any claims, the Court indicated during the hearing that it was inclined to construe the “zone scene” term as follows:

<b>“zone scene”</b>	“A previously saved grouping of zone players according to a common theme”
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Markman Hr’g Tr. at 38:1-3. The Court also indicated that it was inclined to hold claims 1, 12, and 17 of the ‘206 Patent indefinite (*id.* at 52:5-7) and that the Court would, for claims 3, 15, and 26 of the ‘615 Patent, “maintain the construction of [] indefinite,” explaining that the typographical error Sonos alleged in claims 3, 15, and 26 of the ‘615 Patent “may have been a mistake during the prosecution and maybe the Patent Office can address it through some manner they have, but I don’t believe I can,” (*id.* at 66:22 – 67:1-2). For the remainder of the claim terms of the Asserted Patents, the Court declined to construe these claims terms and indicated that no construction is necessary at this time. *Id.* at 6:2-17.

In these contentions and exhibits, Sonos has applied the Court’s construction for the claim term “zone scene.” For the remainder of the claim terms, Sonos has applied the plain and ordinary meaning of those claim terms in the context of the patent in which each claim term resides, as Sonos understands it. For the avoidance of doubt, Sonos reserves its right to supplement these contentions and exhibits based on changes or additional constructions as well as in response to positions Google or its expert(s) take regarding the construction of any claim term and further reserves the right to introduce and use such supplemental materials at trial.

### III. ASSERTED PATENTS AND ACCUSED PRODUCTS

Sonos contends that the Asserted Patents are infringed, either individually or in combination, by the following products (individually or collectively, “**Accused Product(s)**”):

#### ’615 and ’033 Patents

- Smartphone, tablet, and computer devices, including Google’s own “Pixel” smartphone, tablet, and computer devices (e.g., the Pixel, Pixel XL, Pixel 2, Pixel 2 XL, Pixel 3, Pixel 3 XL, Pixel 3a, Pixel 3a XL, Pixel 4, Pixel 4 XL, Pixel 4a, Pixel 4a (5G), Pixel 5, Pixel 5a (5G), and Pixel 6 phones, the Pixel Slate tablet, and the Pixelbook and Pixelbook Go laptops), as well as third-party smartphone, tablet, or computer devices, that are installed with (i) any of Google’s own Cast-enabled Android, iOS, or Chrome apps that allow a user to transfer playback of streaming media content from the user’s smartphone, tablet, or computer devices to a Cast-enabled media player and then control the Cast-enabled media player’s playback, including but not limited to the YouTube Music app, Google Play Music app, YouTube app, Google Podcasts app, and YouTube TV app, and/or (ii) any third-party Cast-enabled app that allows a user to transfer playback of streaming media content from the user’s smartphone, tablet, or computer devices to a Cast-enabled media player and then control the Cast-enabled media player’s playback, including but not limited to the Spotify app<sup>1</sup> (referred to herein either individually or collectively as the “**accused Cast-enabled apps**”);
- Cast-enabled media players having a display screen and installed with Cast-enabled software (e.g., firmware and/or Cast-enabled apps) that allows a user to transfer playback of streaming media content from the Cast-enabled media player to another Cast-enabled media player and then control the other Cast-enabled media player’s playback, including Google’s Home Hub, Nest Hub, and Nest Hub Max media players (referred to herein as “**Cast-enabled displays**”);

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<sup>1</sup> See, e.g., [https://support.google.com/chromecastbuiltin/answer/6279384?hl=en#zippy=%2Cbefore-you-begin-casting%2Ccast-from-chromecast-enabled-apps-to-your-audio-device%2Cfind-new-content-to-cast;](https://support.google.com/chromecastbuiltin/answer/6279384?hl=en#zippy=%2Cbefore-you-begin-casting%2Ccast-from-chromecast-enabled-apps-to-your-audio-device%2Cfind-new-content-to-cast;https://www.google.com/chromecast/built-in/apps/)  
[https://www.google.com/chromecast/built-in/apps/.](https://www.google.com/chromecast/built-in/apps/)

- Servers that host at least one of the accused Cast-enabled apps for download onto smartphone, tablet, and computer devices; and
- Cloud-based infrastructure hosting backend software that facilitates the aforementioned Cast functionality for transferring playback of streaming media content to a Cast-enabled media player and/or controlling the Cast-enabled media player's playback.

'966 Patent

- Smartphone, tablet, and computer devices, including Google's own "Pixel" smartphone, tablet, and computer devices (e.g., the Pixel, Pixel XL, Pixel 2, Pixel 2 XL, Pixel 3, Pixel 3XL, Pixel 3a, Pixel 3a XL, Pixel 4, Pixel 4 XL, Pixel 4a, Pixel 4a (5G), Pixel 5, Pixel 5a (5G), and Pixel 6 phones, the Pixel Slate tablet, and the Pixelbook and Pixelbook Go laptops), as well as third-party smartphone, tablet, or computer devices, that are installed with the Google Home app; and
- Servers that host the Google Home app for download onto smartphone, tablet, and computer devices.

'885 Patent

- **Cast-enabled media players**, including Google's Chromecast, Chromecast Ultra, Chromecast Audio, Chromecast with Google TV, Home Mini, Nest Mini, Home, Home Max, Home Hub, Nest Hub, Nest Hub Max, Nest Audio, and Nest Wifi Point media players.

Charts setting forth how these Accused Products meet the elements of each asserted claim of the Asserted Patents are attached hereto as Exhibits A-D. At this stage, Sonos provides charts for the following claims of the Asserted Patents:

- '615 Patent: claims 1-3, 6-9, 11-15, 18-21, 23-26, 28-29 (Exhibit A)
- '033 Patent: claims 1-2, 4, 7-13, 15-16 (Exhibit B)
- '966 Patent: claims 1-4, 6-12, 14-20 (Exhibit C)
- '885 Patent: claims 1-3, 5-10, 12-17, and 19-20 (Exhibit D)

**A. Direct Infringement Under 35 U.S.C. § 271(a)**

'615 and '033 Patents: As set forth in Exhibits A and B, each smartphone, tablet, and computer device installed with any one or more of the accused Cast-enabled apps (referred to herein as a "**Cast-enabled computing device**"), as well as each Cast-enabled display, infringes the asserted claims of the '615 and '033 Patents. Thus, Google has directly infringed and

continues to directly infringe each asserted claim of the '615 and '033 Patents at least by offering to sell, selling, and/or importing into the United States, its "Pixel" brand of Cast-enabled computing devices as well as its Cast-enabled displays, in violation of 35 U.S.C. § 271(a).

Further, on information and belief, Google has directly infringed and continues to directly infringe each asserted claim of the '615 and '033 Patents by virtue of installing one or more of the accused Cast-enabled apps onto Cast-enabled computing devices and installing Cast-enabled software (e.g., firmware updates and/or Cast-enabled apps) onto Cast-enabled displays within the United States, which constitutes "mak[ing]" an infringing device under 35 U.S.C. § 271(a).

Further yet, on information and belief, Google has directly infringed and continues to directly infringe each asserted claim of the '615 and '033 Patents by virtue of testing Cast-enabled computing devices and testing Cast-enabled displays within the United States, which constitutes "us[ing]" an infringing device under 35 U.S.C. § 271(a).

Still further, on information and belief, Google operates servers in the United States that host Cast-enabled apps for download onto Cast-enabled computing devices and/or Cast-enabled software (e.g., firmware and/or Cast-enabled apps) for download onto Cast-enabled displays, and these servers infringe certain asserted claims of the '615 and '033 Patents. Thus, Google has also directly infringed and continues to directly infringe certain asserted claims of the '615 and '033 Patents by "mak[ing]" and/or "us[ing]" servers that host this software in violation of 35 U.S.C. § 271(a).

'966 Patent: As set forth in Exhibit C, each computing device installed with at least the Google Home app infringes every asserted claim of the '966 Patent. Thus, Google has directly infringed and continues to directly infringe each asserted claim of the '966 Patent at least by offering to sell, selling, and/or importing into the United States, its "Pixel" brand of computing devices that are installed with the Google Home app.

Further, on information and belief, Google has directly infringed and continues to directly infringe each asserted claim of the '966 Patent by virtue of installing at least the Google Home

app onto computing devices, which constitutes “mak[ing]” an infringing device under 35 U.S.C. § 271(a).

Further yet, on information and belief, Google has directly infringed and continues to directly infringe each asserted claim of the ’966 Patent by virtue of testing computing devices installed with at least the Google Home app, which constitutes “us[ing]” an infringing device under 35 U.S.C. § 271(a).

Still further, on information and belief, Google operates servers in the United States that host at least the Google Home app for download onto smartphone, tablet, and computer devices, and these servers infringe certain asserted claims of ’966 Patent. Thus, Google has also directly infringed and continues to directly infringe certain asserted claims of the ’966 Patents at least by “mak[ing]” and/or “us[ing]” servers that host at least the Google Home app in violation of 35 U.S.C. § 271(a).

’885 Patent: As set forth in Exhibit D, each Cast-enabled media player infringes every asserted claim of the ’885 Patent. Thus, Google has directly infringed and continues to directly infringe each asserted claim of the ’885 Patent at least by offering to sell, selling, and/or importing into the United States, Cast-enabled media players.

Further, on information and belief, Google has directly infringed and continues to directly infringe each asserted claim of the ’885 Patent by virtue of installing software (e.g., firmware updates) onto Cast-enabled media players, which constitutes “mak[ing]” an infringing device under 35 U.S.C. § 271(a).

Further yet, on information and belief, Google has directly infringed and continues to directly infringe each asserted claim of the ’885 Patent by virtue of using Cast-enabled media players, which constitutes “us[ing]” an infringing device under 35 U.S.C. § 271(a).

#### **B. Induced Infringement Under 35 U.S.C. § 271(b)**

Pursuant to 35 U.S.C. § 271(b), Google also actively, knowingly, and intentionally induced (and continues to actively, knowingly, and intentionally induce) others to make, use, offer to sell, sell, and/or import the Accused Products into the United States. As noted in



Sonos's Amended Complaint, Google had actual knowledge of the Asserted Patents prior to the filing of the Complaint. *See also* Sonos's response to Google's Interrogatory No. 14, which is incorporated by reference herein.

'615 and '033 Patents: As set forth in Exhibits A and B, each Cast-enabled computing device, as well as each Cast-enabled display, infringes every asserted claim of the '615 and '033 Patents. Despite knowing of the '615 and '033 Patents, Google has actively, knowingly, and intentionally induced (and continues to actively, knowingly, and intentionally induce) others to directly infringe the asserted claims in various ways, in violation of 35 U.S.C. § 271(b).

For example, through Google's website, advertising and promotional material, user guides, and/or the Google Play Store, Google has actively, knowingly, and intentionally encouraged and induced (and continues to actively, knowingly, and intentionally encourage and induce) others to install one or more of the accused Cast-enabled apps (including Google's own Cast-enabled apps and third-party Cast-enabled apps such as Spotify) onto computing devices, and thereby "make[]" an infringing device, which constitutes direct infringement of the asserted claims of the '615 and '033 Patents under 35 U.S.C. § 271(a).

As another example, through Google's website, advertising and promotional material, user guides, and Cast-enabled apps, Google has actively, knowingly, and intentionally encouraged and induced (and continues to actively, knowingly, and intentionally encourage and induce) others to install Cast-enabled software (e.g., firmware updates and/or Cast-enabled apps) onto the Cast-enabled displays, and thereby "make[]" an infringing device, which constitutes direct infringement of the asserted claims of the '615 and '033 Patents under 35 U.S.C. § 271(a).

As yet another example, through Google's website, advertising and promotional material, user guides, and/or the Google Play Store, Google has actively, knowingly, and intentionally encouraged and induced (and continues to actively, knowingly, and intentionally encourage and induce) others to "use" Cast-enabled computing devices installed with one or more of the accused Cast-enabled apps (including Google's own Cast-enabled apps and third-party Cast-

enabled apps such as Spotify) and “use” Cast-enabled displays, which constitutes direct infringement of the asserted claims of the ’615 and ’033 Patents under 35 U.S.C. § 271(a).

As a further example, Google has actively, knowingly, and intentionally encouraged and induced (and continues to actively, knowingly, and intentionally encourage and induce) distributors and retailers to “offer[] to sell” and “sell[]” Cast-enabled computing devices installed with one or more of the accused Cast-enabled apps as well as Cast-enabled displays, which constitutes direct infringement of the asserted claims of the ’615 and ’033 Patents under 35 U.S.C. § 271(a).

As still another example, by making, importing, offering to sell, and selling Cast-enabled media players programmed with software that facilitates the accused Cast functionality in the accused Cast-enabled apps and Cast-enabled software for transferring playback of streaming media content from a Cast-enabled computing device or Cast-enabled display to a Cast-enabled media player and then controlling the Cast-enabled media player’s playback via the Cast-enabled computing device or Cast-enabled display, Google has actively, knowingly, and intentionally induced (and continues to actively, knowingly, and intentionally induce) others to “mak[e]” and “use” Cast-enabled computing devices and Cast-enabled displays, which constitutes direct infringement of the asserted claims of the ’615 and ’033 Patents under 35 U.S.C. § 271(a).

As still a further example, for certain of the accused Cast-enabled apps (including Google’s own Cast-enabled apps and third-party apps such as Spotify), the backend software that facilitates the accused Cast functionality for transferring playback of streaming media content from a Cast-enabled computing device or Cast-enabled display to a Cast-enabled media player and then controlling the Cast-enabled media player’s playback via the Cast-enabled computing device or Cast-enabled display is hosted by Google on Cloud-based infrastructure that is owned and/or operated by Google (sometimes referred to as Google Cloud Platform or “GCP” for short), and by virtue of hosting this backend software, Google has actively, knowingly, and intentionally induced (and continues to actively, knowingly, and intentionally induce) others to “mak[e]” and “use” Cast-enabled computing devices and Cast-enabled displays, which

constitutes direct infringement of the asserted claims of the '615 and '033 Patents under 35 U.S.C. § 271(a).

As another example, through its relationship and collaboration with third parties such as Spotify that develop and release third-party Cast-enabled apps having the accused Cast functionality for transferring playback of streaming media content from a Cast-enabled computing device or Cast-enabled display to a Cast-enabled media player and then controlling the Cast-enabled media player's playback via the Cast-enabled computing device or Cast-enabled display, Google has actively, knowingly, and intentionally induced (and continues to actively, knowingly, and intentionally induce) such third parties to "make[]" and "use[]" Cast-enabled computing devices and Cast-enabled displays, which constitutes direct infringement of the asserted claims of the '615 and '033 Patents under 35 U.S.C. § 271(a).

Along with its actual knowledge of the '615 and '033 Patents, Google also knew (or should have known) that its actions would induce others to directly infringe the asserted claims of the '615 and '033 Patents. For example, Google has supplied and continues to supply from the United States its own Cast-enabled apps to users in the United States and abroad and encourages installation and use of such Cast-enabled apps in the United States and abroad while knowing that the installation and use of Google's Cast-enabled apps will infringe the asserted claims of the '615 and '033 Patents. As another example, Google has supplied and continues to supply from the United States its Cast technology for incorporation into third-party Cast-enabled apps (such as Spotify) and encourages installation and use of such third-party Cast-enabled apps while knowing that the installation and use of these third-party Cast-enabled apps will infringe the asserted claims of the '615 and '033 Patents. As yet another example, Google has supplied and continues to supply Cast-enabled displays (and software for the Cast-enabled displays) to users and encourages installation and use of Cast-enabled software on the Cast-enabled displays while knowing that such installation and use will infringe the asserted claims of the '615 and '033 Patents. As still another example, for certain of the accused Cast-enabled apps (including Google's own Cast-enabled apps and third-party apps such as Spotify), Google has hosted and

continues to host backend software that facilitates the accused Cast functionality on Cloud-based infrastructure that is owned and/or operated by Google while knowing that installation and use of such Cast-enabled apps will infringe the asserted claims of the '615 and '033 Patents.

'966 Patent: As set forth in Exhibit C, each computing device installed with at least the Google Home app infringes every asserted claim of the '966 Patent. Despite knowing of the '966 Patent, Google has actively, knowingly, and intentionally induced (and continues to actively, knowingly, and intentionally induce) others to directly infringe the asserted claims by actively encouraging others to make, use, offer to sell, sell, and/or import the aforementioned devices into the United States in violation of 35 U.S.C. § 271(b).

For example, through Google's website, advertising and promotional material, user guides, and/or the Google Play Store, and via audible or visual instructions emitted from or displayed on the Cast-enabled media players and Cast-enabled displays, Google has actively, knowingly, and intentionally encouraged and induced (and continues to actively, knowingly, and intentionally encourage and induce) others to install the Google Home app onto computing devices, and thereby "make[]" an infringing device, which constitutes direct infringement of the asserted claims of the '966 Patent under 35 U.S.C. § 271(a).

As another example, through Google's website, advertising and promotional material, user guides, and/or the Google Play Store, and via audible or visual instructions emitted from or displayed on the Cast-enabled media players and Cast-enabled displays, Google has actively, knowingly, and intentionally encouraged and induced (and continues to actively, knowingly, and intentionally encourage and induce) others to "use" computing devices installed with the Google Home app, which constitutes direct infringement of the asserted claims of the '966 Patent under 35 U.S.C. § 271(a).

As yet another example, Google has actively, knowingly, and intentionally encouraged and (and continues to actively, knowingly, and intentionally encourage and induce) distributors and retailers to "offer[] to sell" and "sell[]" computing devices installed with at least the Google

Home app, which constitutes direct infringement of the asserted claims of the '966 Patent under 35 U.S.C. § 271(a).

As still another example, by making, importing, offering to sell, and selling Cast-enabled media players that require users to install the Google Home app in order to set up and configure the Cast-enabled media players and Cast-enabled displays, Google has actively, knowingly, and intentionally induced (and continues to actively, knowingly, and intentionally induce) others to “mak[e]” and “use” computing devices installed with the Google Home app, which constitutes direct infringement of the asserted claims of the '966 Patent under 35 U.S.C. § 271(a).

Along with its actual knowledge of the '966 Patent, Google also knew (or should have known) that its actions would induce others to directly infringe the asserted claims of the '966 Patent. For example, Google has supplied and continues to supply from the United States the Google Home app to users in the United States and abroad while knowing that the download and installation of this app will infringe the asserted claims of the '966 Patent.

'885 Patent: As set forth in Exhibit D, each Cast-enabled media player infringes every asserted claim of the '885 Patent. Despite knowing of the '885 Patent, Google has actively, knowingly, and intentionally induced (and continues to actively, knowingly, and intentionally induce) others to directly infringe the asserted claims by actively encouraging others to make, use, offer to sell, sell, and/or import Cast-enabled media players into the United States in violation of 35 U.S.C. § 271(b).

For example, through Google's website, advertising and promotional material, user guides, the Google Home app (among other apps offered by Google), and/or the Google Play Store, Google has actively, knowingly, and intentionally encouraged and induced (and continues to actively, knowingly, and intentionally encourage and induce) others to install firmware updates onto Cast-enabled media players, and thereby “make[]” an infringing device, which constitutes direct infringement of the asserted claims of the '885 Patent under 35 U.S.C. § 271(a).

As another example, through Google’s website, advertising and promotional material, user guides, the Google Home app (among other apps offered by Google), and/or the Google Play Store, Google has actively, knowingly, and intentionally encouraged and induced (and continues to actively, knowingly, and intentionally encourage and induce) others to “use” Cast-enabled media players, which constitutes direct infringement of the asserted claims of the ’885 Patent under 35 U.S.C. § 271(a).

As yet another example, Google has actively, knowingly, and intentionally induced (and continues to actively, knowingly, and intentionally induce) distributors and retailers to “offer[] to sell” and “sell[]” Cast-enabled media players, which constitutes direct infringement of the asserted claims of the ’885 Patent under 35 U.S.C. § 271(a).

Along with its actual knowledge of the ’885 Patent, Google also knew (or should have known) that its actions would induce others to directly infringe the asserted claims of the ’885 Patent. For instance, Google has supplied and continues to supply Cast-enabled media players (as well as firmware updates) to users while knowing that the use of Cast-enabled media players will infringe the asserted claims of the ’885 Patent.

**C. Contributory Infringement Under 35 U.S.C. § 271(c)**

Pursuant to 35 U.S.C. § 271(c), Google has also contributorily infringed (and continues to contributorily infringe) the asserted claims of the Asserted Patents by supplying software components in the United States to be installed and/or used by users of the Accused Products – each of which is a material component of the Accused Products that has no substantial noninfringing use – with knowledge that the software components were especially made or adapted for use in an Accused Product such that the installation and/or use of the software components would result in direct infringement. As noted in Sonos’s Amended Complaint, Google had actual knowledge of the Asserted Patents prior to the filing of the Complaint. *See also* Sonos’s response to Google’s Interrogatory No. 14, which is incorporated by reference herein.

'615 and '033 Patents: Google has contributorily infringed (and continues to contributorily infringe) the asserted claims of the '615 and '033 Patents by virtue of the fact that (1) in addition to importing and selling certain Cast-enabled computing devices that come pre-installed with one or more of the accused Cast-enabled apps, Google supplies software components for performing the accused Cast functionality as part of Google's own Cast-enabled apps for installation onto Cast-enabled computing devices in the United States and also as part of Google's own Cast-enabled software (e.g., firmware and/or Cast-enabled apps) for installation onto Cast-enabled displays in the United States, and each time a user installs these software components, the user "makes" an infringing device and thereby directly infringes the asserted claims of the '615 and '033 Patents under 35 U.S.C. § 271(a), and (2) on information and belief, Google additionally supplies software components for performing the accused Cast functionality to third parties (such as Spotify) that incorporate such software code into third-party Cast-enabled apps for installation onto Cast-enabled computing devices and/or Cast-enabled displays in the United States, and each time a user installs these software components, the user "makes" and infringing device.

The software components for performing the accused Cast functionality are material components of infringing devices that are not staple articles or commodities of commerce suitable for substantial noninfringing use because the only possible use for these software components is to be installed and run on infringing Cast-enabled computing devices and Cast-enabled displays.

Along with its actual knowledge of the '615 and '033 Patents, Google knew (or should have known) that the software components for performing the accused Cast functionality were especially made or adapted for installation on infringing devices, and that installation of these software components by others resulted in (and continues to result in) direct infringement of the '615 and '033 Patents under 35 U.S.C. § 271(a) because each such installation "makes" a device that meets every element of every asserted claims of the '615 and '033 Patents.

Moreover, as a result of Google's contributory conduct, others have directly infringed the asserted claims of the '615 and '033 Patents. For example, users have installed the supplied software components for performing the accused Cast functionality (which are included in Google's own Cast-enabled apps, as well as third-party apps such as Spotify) onto Cast-enabled computing devices in the United States, thereby "making" infringing devices. As another example, users have installed the supplied software components for performing the accused Cast functionality (which are included in firmware, as well as Cast-enabled apps) onto Cast-enabled displays in the United States, thereby "making" updated Cast-enabled displays that are infringing devices. As yet another example, after installing the supplied software components for performing the accused Cast functionality onto Cast-enabled computing devices and Cast-enabled displays, users have used these infringing devices, which also constitutes direct infringement.

'966 Patent: Google has contributorily infringed (and continues to contributorily infringe) the asserted claims of the '966 Patent by virtue of the fact that it supplies software components for performing the accused functionality as part of the Google Home app in the United States, and each time a user installs the Google Home app onto a computing device, the user "makes" an infringing device and thereby directly infringes the asserted claims of the '966 Patent under 35 U.S.C. § 271(a). The software components included in the Google Home app are material components of infringing devices that are not staple articles or commodities of commerce suitable for substantial noninfringing use because the only possible use for these software components is to be installed and run on infringing computing devices.

Along with its actual knowledge of the '966 Patent, Google knew (or should have known) that the software components included in the Google Home app were especially made or adapted for installation on infringing devices, and that installation of these software components by others resulted in (and continues to result in) direct infringement of the '966 Patent under 35 U.S.C. § 271(a) because each such installation "makes" a device that meets every element of every asserted claims.



Moreover, as a result of Google's contributory conduct, others have directly infringed the asserted claims of the '966 Patent. For example, users have installed the supplied software components included as part of the Google Home app onto computing devices in the United States, thereby "making" infringing computing devices. As another example, after installing the software components included as part of the Google Home app onto computing devices, users have used these infringing devices, which also constitutes direct infringement of the asserted claims.

'885 Patent: Google has contributorily infringed (and continues to contributorily infringe) the asserted claims of the '885 Patent by virtue of the fact that, in addition to importing and selling Cast-enabled media players that come pre-installed with firmware, Google supplies software components for performing the accused functionality as part of firmware updates for Cast-enabled media players in the United States, and each time a user installs such a firmware update, the user "makes" an infringing device and thereby directly infringes the asserted claims of the '885 Patent under 35 U.S.C. § 271(a). The software components included in the firmware updates are material components of Cast-enabled media players that are not staple articles or commodities of commerce suitable for substantial noninfringing use because the only possible use for these software components is to be installed and run on Cast-enabled media players.

Along with its actual knowledge of the '885 Patent, Google knew (or should have known) that the software components included in the firmware updates were especially made or adapted for installation on Cast-enabled media players, and that installation of these software components by others resulted in (and continues to result in) direct infringement of the '885 Patent under 35 U.S.C. § 271(a) because each such installation "makes" an updated player that meets every element of every asserted claims.

Moreover, as a result of Google's contributory conduct, others have directly infringed the asserted claims of the '885 Patent. For example, users have installed the supplied software components included as part of the firmware updates onto Cast-enabled media players in the United States, thereby "making" updated Cast-enabled media players, which constitutes direct

infringement. As another example, after installing the software components included as part of the firmware updates onto Cast-enabled media players, users have used Cast-enabled media players, which also constitutes direct infringement of the asserted claims.

**D. Infringement Under 35 U.S.C. § 271(f)(1)**

Pursuant to 35 U.S.C. § 271(f)(1), Google has also infringed by supplying in or from the United States software and/or firmware components, which constitute substantial portions of the components of Sonos's patented inventions, and actively, knowingly, and intentionally induced (and continues to actively, knowingly, and intentionally induce) others outside of the United States to combine these software and/or firmware components in a manner that, if such combination would have occurred in the United States (as it does pursuant to the theories set forth in Section III.B), infringes the asserted claims of the Asserted Patents. And these combinations by those outside of the United States do in fact occur. Accordingly, by supplying such software and/or firmware components from the United States, Google is liable for infringement under 35 U.S.C. § 271(f)(1).

'615 and '033 Patents: As set forth in Exhibits A and B, each Cast-enabled computing device, as well as each Cast-enabled display, infringes every asserted claim of the '615 and '033 Patents. Despite knowing of the '615 and '033 Patents, Google supplies software components for performing the accused Cast functionality as part of Google's own Cast-enabled apps for installation onto Cast-enabled computing devices and also as part of Google's own Cast-enabled software (e.g., firmware and/or Cast-enabled apps) for installation onto Cast-enabled displays. These software and/or firmware components are at least substantial portions of the components of the patented inventions of the '615 and '033 Patents. Google supplies these software and/or firmware components from the United States to various entities outside the United States. Google then induces those entities to combine the supplied components in a manner that would, if combined within the United States, constitute infringement. Google has actively, knowingly, and intentionally induced (and continues to actively, knowingly, and intentionally induce) these

entities to make such combinations outside the United States in various ways, in violation of 35 U.S.C. § 271(f)(1).

For example, through Google's website, advertising and promotional material, user guides, and/or the Google Play Store, Google has actively, knowingly, and intentionally encouraged and induced (and continues to actively, knowingly, and intentionally encourage and induce) others outside the United States to install one or more of the accused Cast-enabled apps (including Google's own Cast-enabled apps and third-party Cast-enabled apps such as Spotify) onto computing devices outside of the United States. If this combination were done within the United States, that act would constitute "mak[ing]" an infringing device, which constitutes direct infringement of the asserted claims of the '615 and '033 Patents under 35 U.S.C. § 271(a).

As another example, through Google's website, advertising and promotional material, user guides, and Cast-enabled apps, Google has actively, knowingly, and intentionally encouraged and induced (and continues to actively, knowingly, and intentionally encourage and induce) others outside the United States to install Cast-enabled software (e.g., firmware updates and/or Cast-enabled apps) onto the Cast-enabled displays outside of the United States. If this combination were done within the United States, that act would constitute "mak[ing]" an infringing device, which constitutes direct infringement of the asserted claims of the '615 and '033 Patents under 35 U.S.C. § 271(a).

As another example, through Google's relationship with third-party manufacturers, third-party distributors, or via an otherwise affiliated entity that acts in a manufacturer or distributor role, Google actively, knowingly, and intentionally encourage and induces or instructs such parties to install one or more of the accused Cast-enabled apps (including Google's own Cast-enabled apps and third-party Cast-enabled apps such as Spotify) onto computing devices outside of the United States. If this combination were done within the United States, that act would constitute "mak[ing]" an infringing device, which constitutes direct infringement of the asserted claims of the '615 and '033 Patents under 35 U.S.C. § 271(a).

As another example, through Google's relationship with third-party manufacturers, third-party distributors, or via an otherwise affiliated entity that acts in a manufacturer or distributor role, Google actively, knowingly, and intentionally encourage and induces or instructs such parties to install Cast-enabled software (e.g., firmware updates and/or Cast-enabled apps) onto the Cast-enabled displays outside of the United States. If this combination were done within the United States, that act would constitute "mak[ing]" an infringing device, which constitutes direct infringement of the asserted claims of the '615 and '033 Patents under 35 U.S.C. § 271(a).

As still another example, through Google's relationship with entities (including affiliated entities) that operate servers outside of the United States that host Cast-enabled apps for download onto Cast-enabled computing devices and/or Cast-enabled software (e.g., firmware and/or Cast-enabled apps) for download onto Cast-enabled displays, Google actively, knowingly, and intentionally encourages and induces or instructs these entities to load, store, or otherwise provide the Cast-enabled apps and/or Cast-enabled software onto these servers. If this combination were done within the United States, that act would constitute direct infringement of certain asserted claims of the '615 and '033 Patents by "mak[ing]" and/or "us[ing]" servers that host such software in violation of 35 U.S.C. § 271(a).

As still another example, through its relationship and collaboration with third parties outside the United States such as Spotify that develop and release third-party Cast-enabled apps having the accused Cast functionality for transferring playback of streaming media content from a Cast-enabled computing device or Cast-enabled display to a Cast-enabled media player and then controlling the Cast-enabled media player's playback via the Cast-enabled computing device or Cast-enabled display, Google has provided software components to these third parties and then actively, knowingly, and intentionally induced (and continues to actively, knowingly, and intentionally induce) such third parties to incorporate these software components into apps and products in a manner that if done within the United States, would constitute direct infringement of certain asserted claims of the '615 and '033 Patents by "mak[ing]" or "us[ing]" an infringing device under 35 U.S.C. § 271(a).

'966 Patent: As set forth in Exhibit C, each computing device installed with at least the Google Home app infringes every asserted claim of the '966 Patent. Despite knowing of the '966 Patent, Google supplies the Google Home app from the United States to various entities outside the United States. Google then induces those entities to combine the Google Home app in a manner that would, if combined within the United States, constitute infringement. Google has actively, knowingly, and intentionally induced (and continues to actively, knowingly, and intentionally induce) these entities to make such combinations outside the United States in various ways, in violation of 35 U.S.C. § 271(b).

For example, through Google's website, advertising and promotional material, user guides, and/or the Google Play Store, and via audible or visual instructions emitted from or displayed on the Cast-enabled media players and Cast-enabled displays, Google has actively, knowingly, and intentionally encouraged and induced (and continues to actively, knowingly, and intentionally encourage and induce) others outside the United States to install the Google Home app onto computing devices outside the United States. If this combination were done within the United States, that act would constitute "mak[ing]" an infringing device, which constitutes direct infringement of the asserted claims of the '966 Patent under 35 U.S.C. § 271(a).

As another example, through Google's relationship with entities (including affiliated entities) that operate servers outside of the United States that host the Google Home app for download onto smartphone, tablet, and computer devices, Google actively, knowingly, and intentionally encourage and induces or instructs these entities to load, store, or otherwise provide the Google Home app onto these servers. If this combination were done within the United States, that act would constitute direct infringement of certain asserted claims of the '966 Patent by "mak[ing]" and/or "us[ing]" servers that host such software in violation of 35 U.S.C. § 271(a).

'885 Patent: As set forth in Exhibit D, each Cast-enabled media player infringes every asserted claim of the '885 Patent. Despite knowing of the '885 Patent, Google supplies from the United States software components for performing the accused functionality as part of firmware

updates for Cast-enabled media players. Google then through Google’s website, advertising and promotional material, user guides, the Google Home app (among other apps offered by Google), and/or the Google Play Store, Google has actively, knowingly, and intentionally encouraged and induced (and continues to actively, knowingly, and intentionally encourage and induce) others outside the United States to install firmware updates onto Cast-enabled media players outside the United States. If this combination were done within the United States, that act would constitute “mak[ing]” or “us[ing]” an infringing device, which constitutes direct infringement of the asserted claims of the ‘885 Patent under 35 U.S.C. § 271(a).

As another example, through Google’s relationship with third-party manufacturers, third-party distributors, or via an otherwise affiliated entity that acts in a manufacturer or distributor role, Google actively, knowingly, and intentionally encourage and induces or instructs such parties to, outside of the United States, install or load firmware onto Cast-enabled media players. If this combination were done within the United States, that act would constitute “mak[ing]” an infringing device, which constitutes direct infringement of the asserted claims of the ‘885 Patent under 35 U.S.C. § 271(a).

#### **D. Infringement Under 35 U.S.C. § 271(f)(2)**

Pursuant to 35 U.S.C. § 271(f)(2), Google has also infringed by supplying software components in or from the United States to be combined, installed, loaded, and/or used by others outside of the United States, where these software components are components of the patented inventions that have no substantial noninfringing use and are not staple articles or commodities of commerce – with knowledge that these software components were especially made or adapted for use and an intent that these software components would be combined, installed, loaded, and/or used outside the United States such that, if such combination, installation, load, and/or use occurred within the United States (as it does pursuant to the theories set forth in Section III.C), it would infringe the asserted claims of the Asserted Patents. And these combinations by those outside of the United States do in fact occur. Accordingly, by supplying such software

components in or from the United States, Google is liable for infringement under 35 U.S.C. § 271(f)(2).

'615 and '033 Patents: As set forth in Exhibits A and B, each Cast-enabled computing device, as well as each Cast-enabled display, infringes every asserted claim of the '615 and '033 Patents. Despite knowing of the '615 and '033 Patents, Google supplies software components for performing the accused Cast functionality as part of Google's own Cast-enabled apps for installation onto Cast-enabled computing devices outside the United States and also as part of Google's own Cast-enabled software (e.g., firmware and/or Cast-enabled apps) for installation onto Cast-enabled displays outside the United States. Google intends that others outside the United States, including users, install these software components onto computing devices and Cast-enabled displays and knows that such installation does in fact occur and that such installation, if occurring in the United States, would constitute "mak[ing]" an infringing device thereby directly infringing the asserted claims of the '615 and '033 Patents under 35 U.S.C. § 271(a).

Despite knowing of the '615 and '033 Patents, Google additionally supplies software components for performing the accused Cast functionality to third parties (such as Spotify) that incorporate such software code into third-party Cast-enabled apps for installation onto Cast-enabled computing devices and/or Cast-enabled displays outside of the United States. Google intends that these third parties (such as Spotify) incorporate such software code into third-party Cast-enabled apps for installation onto Cast-enabled computing devices and/or Cast-enabled displays outside of the United States and knows that such incorporation does in fact occur and that such incorporation, if occurring in the United States, would constitute "mak[ing]" an infringing device thereby directly infringing the asserted claims of the '615 and '033 Patents under 35 U.S.C. § 271(a).

As another example, Google supplies software components for performing the accused Cast functionality to third-party manufacturers, third-party distributors, or to an otherwise affiliated entity that acts in a manufacturer or distributor role, who then, outside of the United

States installs these software components onto computing devices outside of the United States. Google intends that these parties install these software components onto computing devices outside of the United States. If this combination were done within the United States, that act would constitute “mak[ing]” an infringing device, which constitutes direct infringement of the asserted claims of the ’615 and ’033 Patents under 35 U.S.C. § 271(a).

As another example, Google supplies software components for performing the accused Cast functionality to entities (including affiliated entities) that operate servers outside of the United States that host Cast-enabled apps for download onto Cast-enabled computing devices and/or Cast-enabled software (e.g., firmware and/or Cast-enabled apps) for download onto Cast-enabled displays. Google intends that these entities load, store, or otherwise provide the Cast-enabled apps and/or Cast-enabled software onto these servers. If this combination were done within the United States, that act would constitute direct infringement of certain asserted claims of the ’615 and ’033 Patents by “mak[ing]” and/or “us[ing]” servers that host such software in violation of 35 U.S.C. § 271(a).

Google knows the foregoing software components for performing the accused Cast functionality are material components of infringing devices and the patented inventions that are not staple articles or commodities of commerce suitable for substantial noninfringing use because the only possible use for these software components is to be loaded, installed, an/or run on infringing Cast-enabled computing devices and Cast-enabled displays.

’966 Patent: As set forth in Exhibit C, each computing device installed with at least the Google Home app infringes every asserted claim of the ’966 Patent. Despite knowing of the ’966 Patent, Google supplies software components for performing the accused functionality as part of the Google Home app in or from the United States to various entities outside the United States. Google knows and intends for those entities to combine the software components in a manner that would, if combined within the United States, constitute infringement because each combination or installation of the Google Home app onto a computing device would constitute



“mak[ing]” an infringing device and thus directly infringe the asserted claims of the ‘966 Patent under 35 U.S.C. § 271(a).

Google knows that the software components included in the Google Home app are material components of infringing devices that are not staple articles or commodities of commerce suitable for substantial noninfringing use because the only possible use for these software components is to be installed and run on infringing computing devices.

Along with its actual knowledge of the ‘966 Patent, Google knew (or should have known) that the software components included in the Google Home app were especially made or adapted for installation on infringing devices, and that installation of these software components by others outside of the United States would, if done within the United States, constitute (and continues to result in) direct infringement of the ‘966 Patent under 35 U.S.C. § 271(a) because each such installation “makes” a device that meets every element of every asserted claims.

Moreover, as a result of Google’s providing software components of the Google Home app, others have outside of the United States combined the Google Home app in a manner that, if done within the United States, would constitute direct infringement of the asserted claims of the ‘966 Patent. For example, others outside the United States have installed the Google Home app onto computing devices outside the United States. If this combination were done within the United States, that act would constitute “mak[ing]” an infringing device, which constitutes direct infringement of the asserted claims of the ‘966 Patent under 35 U.S.C. § 271(a).

As another example, Google supplies software components of the Google Home app to entities (including affiliated entities) that operate servers outside of the United States that host the Google Home app for download onto smartphone, tablet, and computer devices. Google intends that these entities load, store, or otherwise provide the Google Home app onto these servers. If this combination were done within the United States, that act would constitute direct infringement of certain asserted claims of the ‘966 Patent by “mak[ing]” and/or “us[ing]” servers that host such software in violation of 35 U.S.C. § 271(a).

'885 Patent: As set forth in Exhibit D, each Cast-enabled media player infringes every asserted claim of the '885 Patent. Despite knowing of the '885 Patent, Google supplies in or from the United States software components for performing the accused functionality as part of firmware updates for Cast-enabled media players, and users install such a firmware update outside of the United States in a manner that, if done within the United States, would constitute “mak[ing]” an infringing device and thereby directly infringe the asserted claims of the '885 Patent under 35 U.S.C. § 271(a). The software components included in the firmware updates are material components of the patented invention that are not staple articles or commodities of commerce suitable for substantial noninfringing use because the only possible use for these software components is to be installed and run on Cast-enabled media players.

Along with its actual knowledge of the '885 Patent, Google knew (or should have known) that the software components included in the firmware updates were especially made or adapted for installation on Cast-enabled media players, and that installation of these software components by others outside the United States would, if done within the United States, have resulted in (and continues to result in) direct infringement of the '885 Patent under 35 U.S.C. § 271(a) because each such installation “makes” an updated player that meets every element of every asserted claims.

Moreover, as a result of Google providing such firmware updates others have outside of the United States combined the firmware updates in a manner that, if done within the United States, would constitute direct infringement of the asserted claims of the '885 Patent. For example, users have, outside of the United States, installed the supplied software components included as part of the firmware updates onto Cast-enabled media players outside the United States, which if done within the United States would constitute “making” updated Cast-enabled media players, which constitutes direct infringement.

As another example, Google provides firmware to manufacturers, third-party distributors, or an otherwise affiliated entity that acts in a manufacturer or distributor role, who then, outside of the United States installs or loads such firmware onto Cast-enabled media players. If this

combination were done within the United States, that act would constitute “mak[ing]” an infringing device, which constitutes direct infringement of the asserted claims of the ‘885 Patent under 35 U.S.C. § 271(a).

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Respectfully submitted,

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***ATTORNEYS FOR PLAINTIFF SONOS, INC***

**CERTIFICATE OF SERVICE**

The undersigned hereby certifies that on September 10, 2021, a copy of the foregoing was served via email to all counsel of record.

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